

12 (*original*): The method of claim 7 wherein said catalyst carrier is calcined at 150 to 950 °C.

13 (*currently amended*): The method of claim 7 wherein said porous ceramic carrier is in the form ~~selected from the group consisting of a monolith, honeycomb or chunks, extrudate, pieces, pellets, spheres, herein particles, and a combination thereof closely packed~~ of a honeycomb.

14 (*original*): The method of claim 7 wherein the calcined carrier is contacted with said H₂O₂ in a vehicle having an exhaust nozzle for discharging the decomposition products of said H₂O₂ to propel said vehicle.

15 (*original*): The method of claim 14 wherein said vehicle is a rocket.

16 (*original*): The method of claim 14 wherein said vehicle is selected from the group consisting of a land vehicle, a water vehicle, an aircraft and a spacecraft.

17 (*original*): The method of claim 14 wherein the decomposition products of said H₂O₂ are contacted with fuels selected from solid or liquid propellants in a rocket.

18 (*currently amended*): A method for decomposing H₂O₂ comprising contacting at least one cation with surfaces of a porous ceramic carrier or base and calcining same to form a bulk or activated catalyst, ~~said base being monolithic or being divided into particles which are securely packed into a container,~~ as a monolith, the cation species being selected from the group consisting of Mn, Ag, Ru, Pb, V, Cr and Co and contacting said catalyst with H₂O₂ to decompose same.

19 (*original*): The method of claim 18 wherein said carrier has added thereon at least one catalytic promoter, selected from NH₄⁺ and Groups I and II of the Periodic Table.

20 (*original*): The method of claim 19 wherein said promoter is selected from the group consisting of K⁺, Na⁺, NH₄⁺, Li⁺, Sr⁺ and Ba⁺.

21 (*original*): The method of claim 20 wherein the cation loading on the catalyst carrier is .01 to 20.0 wt. % of the bulk catalyst.

REMARKS

Claims 1-21, less 5, are in the present application. Certain other claims have been amended, as indicated above, to point out the monolithic nature of applicant's catalyst base or carrier. Such monolithic nature has been previously noted, e.g., in applicant's claim 1 herein and no new matter has been added.

The Office Action rejection of claims 7-17 as indefinite under 35 USC 112, second paragraph, for failing to point out and distinctly claim the invention herein is respectfully traversed. Claims 7 & 13 are named in the above rejection. Thus claim 7 is said to be not clear whether "monolithic" is required or optional. Claim 7, as amended, removes this ambiguity by a rewrite in ¶(d) which points out that the activated catalyst is defined as monolith, as indicated above.

As for claim 13, it has been amended and abbreviated to recite that the monolithic base is in the form of a honeycomb structure. Accordingly the above rejection is believed met.

The Office Action rejection of claims 1,4 & 5 as anticipated under 35 USC 102 b) by the Coeckelberghs et al. patent (' 461) is respectfully traversed. This patent, as noted previously, at col. 4, lines 1-7, discloses placing catalyst particles in a porous cartridge, in a reactor 4 of its Figure 1, for flow-through of liquid reagent, e.g., for H₂O₂ flow-through, in contact with such particles.

In contrast Applicant's claims, as amended, define flowing H₂O₂ over a catalyst in the form of a porous monolithic base or carrier. That is, non-monolithic particles, are not suitable as a catalyst in a rocket engine as such particles would be pulverized due to engine vibration and blown out of the reactor and out of the nozzle or worse, block the nozzle.

Accordingly, the Coeckelberghs' patent clearly does not anticipate Applicant's inventive method per his claims 1-21 as amended.

Also, Coeckelberghs' metal oxides are not disclosed as being calcined and thus immobilized, on a monolithic base. Such oxides are thus not equivalent to applicant's claimed calcined cations.

Note that applicant's claims, as amended above, have been narrowed to read on a monolithic base or catalyst i.e., as indicated in claims 1,7 & 18. Likewise, claim 5 has been canceled, as it recites a catalyst in granules, while claim 13 has been abbreviated as noted above, to thus narrow the claims and limit the issues in the present application.

That is, the above claims, as amended, are similar to those which were said to have allowable subject matter in the parent case, in the final rejection dated 10-23-02. Hopefully, these amended claims are now back in allowable territory.

The Office Action rejection of claims 2, 3 as obvious under 35 USC 103(a) over Coeckelberghs et al., in view of a Nakajima or JP 3-218904, is respectfully traversed.

The Office Action rejection of claim 6 as obvious under 35 USC 103(a) over Coeckelberghs et al., in view of Bernard et al, is respectfully traversed.

The Office Action rejection of claims 7, 10-13 & 18 as obvious under 35 USC 103(a) over Coeckelberghs et al, in view of Kuhl et al, is respectfully traversed.

The Office Action rejection of claims 8-9 & 19-21, as obvious under 35 USC 103(a) over Coeckelberghs et al., in view of Kuhl et al and further in view of either Nakajima or JP 3-218,904, is respectfully traversed.

The Office Action rejection of claims 14-17, as obvious under 35 USC 103(a) over Coeckelberghs et al, in view of Kuhl et al and further in view of Bernard et al, is respectfully traversed.

This is because the above independent claims 7 & 18, are believed distinguished over the Coeckelberghs et al. patent for the same reasons as discussed above with respect to claim 1 as amended. Similarly, the above dependent claims of claims 1,7 & 18, are believed distinguished from the applied references, in the above listed rejections, in view of their dependency from their independent claims, which are believed novel over the applied references, including Coeckelberghs et al., for reasons discussed above.

In view of the foregoing, the claims of record, as amended, are believed distinguished over the applied references and in condition for allowance.

In accordance with Section 714.01 of the M.P.E.P., the following information is presented in the event that a call may be deemed desirable by the Examiner, to: Thomas C. Stover, (781) 377-3779.

Respectfully submitted,



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